



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,828	08/25/2003	Jason Clay Pearson	80017	2960

7590 09/20/2005

Michael J. Blake
Eastman Chemical Company
P.O. Box 511
Kingsport, TN 37662-5075

EXAMINER

BADIO, BARBARA P

ART UNIT	PAPER NUMBER
----------	--------------

1617

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/647,828	Applicant(s) PEARSON ET AL.	
	Examiner Barbara P. Badio, Ph.D.	Art Unit 1617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/05; 12/03</u> . | 6) <input type="checkbox"/> Other: ____. |

502

First Office Action on the Merits

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Itoh et al. (US 5,578,419).

Itoh et al. teach anthraquinone dyes and compositions containing said dyes useful for color filters (see the entire article, especially col. 2, line 57 – col. 4, line 51; Table 8, compounds 34, 35, 41). The compounds taught by the reference are encompassed by the instant claims.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1617

4. Claims 1-6 and 9-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itoh et al. (US5,578,419) and Cyr et al. (WO 02/12401) in combination.

Itoh et al. teach anthraquinone dyes and compositions containing said dyes useful for color filters (see the entire article, especially col. 2, line 57 – col. 4, line 51; Table 8, compounds 34, 35, 41). The reference also teaches compositions comprising the compound(s), a resin and optionally a photopolymerization initiator and diluent (see col. 12, lines 21-26; col. 13, line 36 – col. 14, line 29).

The instant claims differ from the reference by reciting compounds not exemplified by Itoh, i.e., compounds wherein the photopolymerizable group is other than $-\text{OCOC}(\text{R}^5)=\text{CH}-\text{R}^5$ (see col. 4, formula (4)). However, Itoh teaches other photopolymerizable groups (see col. 4, formulae (2)-(7)). Therefore, it would have been obvious to the skilled artisan in the art at the time of the present invention to modify compounds 34, 35 and 41 of the cited reference utilizing any of the other photopolymerizable groups with the reasonable expectation of obtaining a compound having similar properties and uses as taught by Itoh.

Claims 4 and 6 differ by reciting compounds wherein Q is formula (7) as defined by claim 2.

Claims 9-14 differ by reciting compositions comprising the dye compound, a polymerizable vinyl compound and a photoinitiator.

Claims 15-18 differ by reciting a concentrate comprising the dye compound and a solvent.

However, Cyr et al. teach anthraquinone compounds and (a) polymerizable groups including formula (4) of Itoh and formulae 1-10 as defined by the present invention (see page 9, line 19 – page 11, line 19); (b) compositions comprising various concentrations of a dye compound, a polymerizable vinyl compound and a photoinitiator (see page 11, lines 20-26; page 30, lines 5-27; page 33, lines 8-16); polymerizable vinyl compounds such as acyclic and methacrylic acids (page 30, lines 12-27); the use of solvents such as acetone (see page 31, line 20 - page 32, line 8); dispersion in water (see page 32, line 23 – page 33, line 7) and in various concentrations. Itoh et al. also teach compositions comprising a resin (polymerizable vinyl compound) and optionally a photopolymerization initiator and a diluent in various concentrations (see col. 12, lines 21-26; col. 13, line 36 – col. 14, line 29).


Based on the combined teachings of Itoh and Cyr, it would have been obvious to the skilled artisan in the art at the time of the present invention to make the compounds of Itoh utilizing any photopolymerizable group, including those taught by Cyr as recited by the instant claims, with the reasonable expectation that the compounds would be useful as a dye. The motivation is based on the teaching of Itoh of the use of any polymerizable group and the teaching of any equivalence between formula (4) of Itoh and formulae (2)-(7) by Cyr. It would also be obvious to skilled artisan in the art to utilize the anthraquinone dye compounds taught Ito in compositions as taught by both Ito and Cyr with the reasonable expectation that said compositions would be useful color filters/coating agents. The motivation is based on the teachings of the cited prior and the level of skill of the ordinary artisan in the art at the time of the present invention.

Telephone Inquiry

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barbara P. Badio, Ph.D. whose telephone number is 571-272-0609. The examiner can normally be reached on M-F from 6:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreenivasan Padmanabhan can be reached on 571-272-0629. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Barbara P. Badio, Ph.D.
Primary Examiner
Art Unit 1617

BB
September 16, 2005